

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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IN RE CREDIT DEFAULT SWAPS ANTITRUST  
LITIGATION : 13 Md. 2476 (DLC)

This Document Relates To: All Actions

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**DECLARATION OF ELIZABETH KROGER DAVIS IN SUPPORT OF CLASS  
COUNSEL'S MOTION FOR AWARD OF ATTORNEYS' FEES, REIMBURSEMENT  
OF EXPENSES, AND INCENTIVE AWARDS FOR CLASS REPRESENTATIVES**

I, Elizabeth Kroger Davis, declare as follows:

1. I am a Managing Director with Berkeley Research Group, LLC (“BRG”).

Counsel for the Plaintiff Class (“Class Counsel”) in *In re Credit Default Swaps Antitrust Litigation*, 13-MD-2476 (DLC) (“CDS Litigation”) retained BRG in March 2014 to provide consulting services pertaining to this Credit Default Swaps (“CDS”) litigation matter. The primary focus of that work was to compile and analyze CDS trading data from the class period of January 1, 2008 through September 25, 2015, including information about the notional volumes that were traded and the bid-ask spreads that may have been incurred, for purposes of developing an economic model that would be capable of estimating the bid-ask spread inflation resulting from the Dealer Defendants’ alleged conduct on a class-wide basis. Later BRG was asked to refine this model so that it could be used to estimate the *pro rata* share of an individual claimant’s Settlement proceeds.

2. As a Managing Director of BRG, I have personal knowledge of the facts set forth in this declaration. I worked on this engagement since its inception, supervising the work performed by BRG. I was principally responsible for the compilation and analysis of the CDS trading volumes and bid-ask spread quote data, and the subsequent application of econometric models to the data. Throughout the assignment, I worked with my colleague, Dr. Sanjay Unni, who was principally responsible for the development of the econometric model framework that was to be applied to the trading data.<sup>1</sup>

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<sup>1</sup> Certain details of the model and its incorporation into the development of an individual claimant’s *pro rata* proceeds are further described in the Plan of Distribution made available to claimants at [www.CDSAntitrustSettlement.com](http://www.CDSAntitrustSettlement.com).

3. In addition to Dr. Unni and myself, a core team of fifteen BRG professionals worked on this case. In addition, two BRG professionals provided research assistance to Professor Darrell Duffie.

4. BRG billed Class Counsel on a monthly basis. All bills reflected the time actually incurred by BRG during the prior month at historical rates, as well as out-of-pocket expenses. All of this time and out-of-pocket expenses were spent on projects conducted under the supervision of Class Counsel. Since inception of this engagement through December 31, 2015, BRG has charged Class Counsel \$5,401,634.89 for professional services and expenses. This does not include the time of various consulting and testifying experts, not employed by BRG, that BRG has worked with.

#### **Pre-Settlement Work**

5. Our work began with extensive research into the CDS market, including market liquidity, the CDS trading market, the standardization of CDS, the available sources of information concerning CDS bid-ask spreads (“Quotes”) and trades, analysis of Quotes, and the impact of electronic and exchange trading on CDS Quotes. This work intensified following the denial of Defendants’ motions to dismiss, when we focused in on the identification of data sources that could be used to analyze CDS trading and Quotes.

6. BRG first began the complex and time-intensive process of downloading and analyzing approximately 2.7 billion records pertaining to daily, historical CDS Quotes for the period January 1, 2008 through December 31, 2013 produced by Defendant Markit. (As described further below, ultimately Markit would produce approximately another 422 million records, bringing the total number of records to almost 3.2 billion records.) Recognizing that the compilation and analysis of this Markit data would require months of work, at the same time

BRG downloaded and compiled historical information published by Bloomberg concerning almost one million daily historical Quotes pertaining to the period January 1, 2008 through December 31, 2013, for use in a preliminary economic model. To analyze the Bloomberg data, BRG developed various algorithms that were needed to standardize the Quotes.

7. We also received the first of several productions from the Depository Trust & Clearing Corporation (“DTCC”), which contained 97 million records including records of individual class members’ purchases and sales of CDS—a figure that would later grow prior to the Settlements to approximately 126 million records. One of BRG’s earliest tasks was developing a mechanism to match the Bloomberg Quotes to certain of these DTCC trades. Post-Settlement, we would ultimately receive two additional productions from the DTCC totaling approximately 159 million records.

8. While one team continued work on the general research into how to build a robust model to apply to this data, another continued to focus on making sense of the mass of records and information we were receiving.

9. This began a time-sensitive and computationally complex process, requiring, among other things, massive data loads, data conversions, and analysis to properly interpret approximately 200 unique data fields in each DTCC record. Algorithms were then created to identify transactions reflecting trades between members of the class and the Dealer Defendants, as opposed to entries associated with transactions that did not fit into the scope of the CDS action.

10. Even after a preliminary version of the model was given to Defendants as part of the mediation process, BRG continued to refine and hone its economic model, including by making adjustments and performing additional analysis to respond to issues raised in the

mediation. We, among other things, completed a review of academic literature into compression rates on financial instruments that had migrated from over-the-counter markets to exchange-trading platforms.

11. BRG also continued to work with the various data sources to ensure they could interact harmoniously in a single economic model. For instance, BRG expended considerable effort identifying and fixing incomplete codes and reference numbers contained in the DTCC and Markit datasets that were necessary to match the millions of records of transaction information in the DTCC dataset to the billions of records of daily Quotes contained in the Markit dataset. We then developed an algorithm that could match the notional amount of a transaction in the DTCC dataset to its corresponding Quote using each CDS contract's reference entity (or index and series), tenor, and trade date, as reported in the DTCC data set. We also had to develop reliable methodologies to address situations where sufficient Markit Quote data was not available for specific CDS on certain days. BRG also had to conform the Markit Quotes to the same pricing format by converting Quotes in running spreads to their equivalent upfront bid and ask prices.

12. Our continued analysis caused counsel to seek additional information concerning every trade from DTCC, resulting in the production of 126 million replacement records that required extensive additional procedures to load, convert, code, de-duplicate, validate, and reconcile these records.

13. BRG also provided support to an expert report in support of Plaintiffs' motion for class certification that set forth the economic model, the CDS trade and Quote data sources it would be applied to, and various supporting analyses. We had made significant progress on the report and supporting analyses when the case settled. Even before the Settlements, BRG also

had begun the work of gathering information about the identification and location of class members from the DTCC dataset and public sources.

14. In addition to the above work, a separate team of BRG economists provided research assistance to Professor Duffie, in connection with his own work in support of class certification.

#### **Post-Settlement Work**

15. The primary focus of our work since we were informed of the Settlements has been to take the economic model we had developed and modify it so each claimant's *pro rata* share of the proceeds can be determined. In addition, BRG has also processed and analyzed substantial new data that was produced by both DTCC and Markit pertaining to the period January 1, 2014 through September 25, 2015.

16. BRG had to develop new codes and algorithms designed to identify the set of transactions that, in accordance with the terms of Paragraph 2(i) of the Settlements, qualified as "Covered Transactions." BRG performed extensive analytical and quality control procedures, and consulted with other experts retained by Class Counsel, to ensure that transactions were correctly identified as "Covered Transactions."

17. This process also required the receipt of still-more data. For instance, BRG received DTCC and Markit records for CDS transactions and Quotes for an expanded time period. As with the prior productions of the DTCC data, extensive work was again required to load, convert, code, de-dupe, validate, and reconcile approximately 19 million additional records. The Markit production, of about 422 million additional records, similarly required loading, conversion, and analysis. These productions were on top of those already discussed above in connection with our pre-Settlement work.

18. This process also required us to continue to scrutinize the data and our models. In performing quality control procedures, BRG also discovered that a significant number of the DTCC trade records previously produced to Plaintiffs' counsel contained anomalies, which resulted in DTCC making additional voluminous productions of corrected data (approximately 140 million records) that had to be processed, analyzed, and validated.

19. Finally, as additional support for the post-Settlement process, BRG has been working with the claims administrator, Garden City Group, LLC ("GCG"), to incorporate the work we had performed, and has continued to work closely with Class Counsel and GCG to identify all "Covered Transactions" for each class member.

20. BRG expects to continue to provide assistance to Class Counsel and the administrator in connection with the administration of the Settlements.

I declare under penalty of perjury that the foregoing is true and correct and was executed on January 27, 2016 in Chicago, Illinois.

By: Elizabeth Kroger Davis  
Elizabeth Kroger Davis